

Critical Thinking

CONCEPT FILE

Cell Structures

Background

Cells

- are the basic units of living things
- are protected by a membrane
- are also protected by a tough outer wall (plant cells)

Vocabulary

Check your understanding—these terms are explained on this page.

- | | |
|--|------------------------------------|
| <input type="checkbox"/> chromosomes | <input type="checkbox"/> nucleus |
| <input type="checkbox"/> cytoplasm | <input type="checkbox"/> protein |
| <input type="checkbox"/> endoplasmic reticulum | <input type="checkbox"/> ribosomes |
| <input type="checkbox"/> membrane | <input type="checkbox"/> vacuole |
| <input type="checkbox"/> nuclear membrane | |

Two Main Areas of the Cell

Nucleus

The nucleus

- is surrounded by a nuclear membrane
- is the control center of the cell
- stores special cell information in chromosomes, tiny threadlike structures seen during cell reproduction

Cytoplasm

The cytoplasm is the place of many cell activities and structures.

- Mitochondria are the "powerhouses," making & storing energy.
- The "building blocks" of cells (proteins) are manufactured by ribosomes (located along the endoplasmic reticulum).
- Cell substances are transported on a network called the endoplasmic reticulum.
- Plant cells have vacuoles in which cell materials are stored.
- Food is made in the chloroplasts of plant cells.

Concept Map: Cell Structures

Name _____

Date _____ Period _____

Directions: Select words from the word list and fill in the blank map items. Use each word only once, and use all the words on the list.

WORD LIST

cell "building blocks"
cell substances
control center
endoplasmic reticulum
energy
membrane
mitochondria
network
nuclear membrane
nucleus
ribosomes
special instructions

